New Zealand Department of Agriculture,
Industries, and Commerce.

THE

JOURNAL

OF

AGRICULTURE.

VOL. XVI.

(JANUARY–JUNE, 1918.)

Published by direction of
The Hon. W. D. S. MACDONALD,
Minister of Agriculture.

IMPERIAL BUREAU
26 NOV. 1921
OF MYCOLOGY

R. H. HOOPER, Editor.

WELLINGTON.
BY AUTHORITY: MARCUS F. MARKS, GOVERNMENT PRINTER.
—
1918.

JOURNAL

OF

AGRICULTURE.

VOLUME XVI.

(January–June, 1918.)

GENERAL INDEX.

A.

Agriculture, a decade of world, 186.
Agriculture, potash in, 249.
Agricultural education: Teachers' Farm School at Ruakura, 150.
Agricultural efficiency and development, contribution of science to, 156.
Agricultural shows, 62, 118, 185, 248, 308.
Agricultural Statistics, International Year-book of, 186.
Agricultural tractor, the, 198.
Agricultural tractors, American, 271.
Alcohol: Manufacture of fuel alcohol from sawdust and timber waste, 286.
Algaroba, carob, or locust trees (*Ceratonia siliqua*), 196.
American agricultural tractors, 271.
"Anconia" sheep-dip, warning regarding, 180.
Answers to correspondents, 54, 115, 181, 243, 304, 383.
Apiary experiments at Ruakura: The "Deadman" super-cleaner, 203.
Apiary, the (monthly notes), 47, 108, 173, 236, 295, 376.
Apples for poultry-feed, 246.
Apples, storing winter, 182.
Apples, "water-core" of, 308.
Apple-trees affected with woolly aphis, 308.
Apricot-tree dropping newly-set fruit, 117.
Arataki, oil-spray tests at, 356.
Arsenic, killing trees with, 357.
Arsenical compound for sheep-skins, 182.
Assistance to wheat-growers, 309.

B.

Barked trees, treatment for, 116.
Barley as poultry-food, 244.
Bees, influence of, on fruit crops, 205.
Black-spot of pear: Orchardist's control experience, 288.
Blindness in sheep, 305.
Blood in cow's milk, 116.
Blue-gum infestation, 243.
Bluestone for worms in sheep, 386.
Bonus for the production of phosphate, 388.
Bracken and young trees, 31.
Bran, prices of pollard, flour, and, 309.
British Empire Producers' Organization, the, 247.
Brown-rot control (experiments at Henderson), 275.
Brown-rot control, 221.
Brown-rot experiments at Arataki, 222.
Brown-rot in cherries controlled, 38.
Buddleias: Good hedge and bee plants, 82.
Butter-fat and milk record, New Zealand, 353.
Butter, preserving in jars, 182.
Butter, purchase of, by the Imperial Government, 120.

C.

Californian-thistle ensilage, 98.
Californian thistle, destroying, 368.
Calves dying on old lucerne, 305.
Carob, algaroba, or locust trees, 196.
Carob-tree and frost, the, 245.
Cattle, contagious abortion in, hints on, 329.
Cattle, dehorning of, 7.

Certificate-of-record cows: A study of type, 15.
Cheese, purchase of, by the Imperial Government, 120.
Cherries, brown-rot in, controlled, 38.
Cherry-tree, badly yielding, 246.
Chicory in pastures, 56.
Citrus trees, working over, 386.
Clean milk, the production of, for human consumption, 27.
Clover-seed and grass-seed, maximum prices of, 248.
Cider-making, 92.
Contagious abortion in cattle, hints on, 329.
Contribution of science to agricultural efficiency and development, the, 156.
Control of brown-rot (Henderson experiments), 275.
Control of brown-rot, 221.
Control of brown-rot in cherries, 38.
Cover-crop for young orchard, 183.
Cows chewing wood, 57.
Cow-forage, 117, 307.
Crossbreeding ducks, 307.
Curing skins and hides for farm use, 185.

D.

Dairy cows, improvement in average production of, 132.
Danthonia on tussock country, 135.
"Deadman" super-cleaner (Ruakura), 203.
Dead weight and live weight of pigs, 55.
Decade of world agriculture, a, 186.
Dehorning of cattle, 7.
Destroying Californian thistle, 368.
Deterioration in fencing-wire (testing by Post and Telegraph Department), 193.
Development of swamp land at Ruakura, 1.
Dipping, late, of ewes and rams, 304.
Downy mildew of the vine: A warning, 367.
Dry-goods beetle, infestation by, 116.
Dry quarter, cow with, 245.
Drying brewers' grains, 244.
Dyestuffs of New Zealand, indigenous tans and vegetable, 358.
Dung manures, relative value of, 54.

E.

Eleagnus and holly hedges, management of, 385.
Ensilage, Californian thistle, 98.
Estimated yields of wheat and oats, 124.
Estuary reclamation at Invercargill, 187.

F.

Facial eczema in sheep, 384.
Fairy rings on lawns, 330.
Farm-school and the rural teacher, 151.
Fencing-wire, testing of, by Post and Telegraph Department, 193.
Field-day at the Ruakura Apiary, 149.
Flour, prices of pollard, bran, and, 309.
Flying-ants and fowls, 306.
Foot-rot in sheep, treatment of, 99.
Foot trouble in sheep, 304.
Forage, variety of oats for winter, 117.
Forestry, private, 334.
Frozen meat, purchase of, by the Imperial Government, 120.
Fruit crops, influence of bees on, 205.
Fruit-trees, grading of, 267.
Fuel alcohol, manufacture of, from sawdust and timber waste, 286.

G.

Garden, the (monthly notes), 51, 112, 178, 240, 299, 379.
Grading of fruit-trees, 267.
Grain-weevil, control of, 387.
Grape-juice, preservation of unfermented, 32.
Grass-lands of New Zealand, the, 126, 210, 258.
Grasses for tidal land, 266.
Grasses suitable for a three-year lea, 307.
Grassing manuka land in Hawke's Bay, 181.
Grass-seed mixture for Mokihinui district, 582.
Grit and grain mill for poultry, 118.
Grass-seed and clover-seed, maximum prices of, 248.
Grub-infested lawn, 385.

H.

Henderson, brown-rot-control experiments at, 275.
Hides, purchase of, by Imperial Government, 59.
Hints on contagious abortion in cattle, 329.
Holly and eleagnus hedges, management of, 385.
Horse with cracked hoof, 383.
Horses with supposed ringworm, 385.

I.

Imperial Government, purchase of wool, sheep-skins, and hides by the, 59.
Implements, manuka-clearing, 41.
Importation of fowl-wheat, 248.

Indigenous tans and vegetable dyestuffs of New Zealand, the, 358.
Influence of bees on fruit crops, the, 205.
Insignis-pine disease, 37.
Injured teat in cow, 115.
International Year-book of Agricultural Statistics, 186.
Invercargill, estuary reclamation at, 187.

J.

Japanese millet, feeding, 115.
Johnson grass, 55.

K.

Kauri forest, the Waipoua, 136.
Killing trees with arsenic, 357.
Kumaras, storage of, 383.

L.

Lambs, renal congestion in, 54.
Lambs, shearing or non-shearing of, 245.
Lampas of horse, 384.
Laurel and poplar cuttings, planting, 246.
Leaf-roller caterpillar declared a disease under Act, 309.
Lemon-trees, treatment of scale on, 306.
Leucorrhœa, cow with, 307.
Light land in Poverty Bay, treatment for, 184.
Lime for egg-shell forming, 244.
Lime-sulphur spray for potato-blight, 100.
Limestone, two notes on, 162.
Linseed-growing for Southland, 304.
Linseed, manure for, 305.
Linseed-oil cake, method of using, 306.
Live weight and dead weight of pigs, 55.
Locust, algaroba, or carob trees, 196.
Lotus major seed at Ruakura, 274.
Lucerne at Somes Island, 195.
Lucerne, establishing, 184.
Lucerne, liming and harrowing, 183.
Lucerne-seed, saving, 243.

M.

Macrocarpa-trees, cutting, 55.
Manufacture of fuel alcohol from sawdust and timber waste, 286.
Manuka-clearing implements, 41.
Manures, prohibition of export of, 124.
Manures, relative value of dung, 54.
Manurial treatment for peaty swamp-land, 116.
Maximum prices of grass-seed and clover-seed, 248.
Mealy bug on vines, 166.
Meat-freezing works in New Zealand, 310, 388.
Mechanical cultivation: The steam-tackle system, 366.
Milk and butter-fat, New Zealand record, 353.
Milk-record for New Zealand, a new champion, 98.
Milk, production of clean, for human consumption, 27.
Milton, poultry-feeding tests at, 331.

N.

Navel rupture, filly with, 243.
New Zealand dairy cows: Improvement in average production, 132.
New Zealand Expeditionary Force: Occupations of reservists, 97.
Nicotine fumigation, unsuccessful for mealy bug on vines, 166.
Nitrogen from the air: Possibilities in New Zealand, 21.

O.

Oats and wheat, estimated yields of, 124.
Oat and wheat threshings, 248, 309, 388.
Oil-spray tests at Arataki, 356.
Oliver's Pride bean, 382.
One-man sheep-handling plant, 354.
Orchard-planting, losses in, 118.
Orchard, the (monthly notes), 42, 101, 168, 231, 291, 371.
Ox-eye daisy, dealing with, 56.

P.

Paspalum in Australia, 164, 328.
Paspalum in New Zealand, 87.
Paspalum, sowing, 383.
Passion-fruit infestation, 243.
Pasture, renovation of, 284.
Pastures, chickory in, 56.
Pedigree seed-wheat, 248.
Phalaris bulbosa, value of, 245.
Phosphate, bonus for the production of, 388.
Phosphate production and resources of the world, 76.
Phosphoric acid in fertilizer analyses, 54.
Pigs, prohibition of export of live, 124.
Pineapples, culture in New Zealand, 308.
Pinus halepensis at Ruakura, 303.
Plough for stumpy ground, 57.
Pohutukawa, propagating the, 57.
Pohutukawa, seed of, for disposal, 333.

Points in Sounds - country management, 39.
Poisonous and suspected plants of New Zealand, the, 324.
Pollard, prices of flour, bran, and, 309.
Poplar and laurel cuttings, planting, 246.
Potash in agriculture, 249.
Potato-growing from true seed, 55.
Poultry - feeding tests at Milton: Heavy breeds, 331.
Poultry-keeping (monthly notes), 45, 104, 170, 233, 293, 374.
Poultry, scalding before plucking, 115.
Pregnancy in farm animals, signs of, 183.
Preservation of unfermented grape-juice, 32.
Private forestry: The Wairarapa, Manawatu, Rangitikei, and Wanganui districts, 334.
Pumpkins for pig-feeding, 353.
Purchase of frozen meat, cheese, and butter by the Imperial Government, 120.
Purchase of wool, sheep - skins, and hides by the Imperial Government, 59.

R.

Rabbits, poisoning with strychnine, 97.
Rape- and turnip-seed production, 311.
Reclamation of estuary at Invercargill, 187.
Reclamation of tidal land by grassing, 183.
Redwater, treatment of, in cow, 306.
Renal congestion in lambs, 54.
Renovation of pasture: Top-dressing tests in Waipukurau County, 284.
Root-knot on imported peach-trees, 167.
Ruakura, development of swamp land at, 1.
Ruakura oat in Western Australia, 131.
Rubber-trees in New Zealand, 308.
Rye-corn for straw, 385.

S.

Salt for the garden, 58.
Scale on lemon-trees, treatment of, 306.
Scottish Journal of Agriculture, the, 247.
Scour in sheep, 56.
Seed-growing for New Zealand, 11.
Seed-testing notes, 369.
Seeds, exchange of, with J. Rafn, 40.
Seedy wool, valuations of, 123.
Shearing or non-shearing of lambs, 245.
Sheep - dip: A warning regarding "Anconia," 180.
Sheep-dog suffering from fits, 244.
Sheep-handling plant, a one-man, 354.
Sheep-dipping points, 20.
Sheep-maggot flies, 36.
Sheep-skins, arsenical compound for, 182.
Sheep-skins, purchase of, by the Imperial Government, 59.
Shows, dates of agricultural, 62, 118, 185, 248, 308.
Somes Island, lucerne at, 195.
Sounds country, points in management, 39.
Spraying-tests at Te Kauwhata, 228.
Strawberry-culture, 142.
Storing winter apples, 182.
Strychnine, poisoning rabbits with, 97.
Sugar-beets for cows, 384.
Sulphur, use of, in agriculture, 6.
Suspected and poisonous plants of New Zealand, 324.
Swamp land at Ruakura, development of, 1.

T.

Tans and vegetable dyestuffs of New Zealand, the indigenous, 358.
Teachers' Farm School at Ruakura, 150.
Tea-plant, growing the, 58.
Te Kauwhata, spraying-tests at, 228.
Testing of fencing-wire by Post and Telegraph Department, 193.
Testing of purebred dairy cows: The certificate-of-record system in 1917, 63.
Threshing of oats and wheat, 309.
Ticks found on farm animals in New Zealand, notes regarding, 83.
Tidal land, grasses for, 266.
Tidal land, reclamation of, by grassing, 183.
Timber waste, manufacture of fuel alcohol from sawdust and, 286.
Top-dressing test for pasture-renovation, Waipukurau County, 284.
Tractor, the agricultural, 198.
Tractors, American agricultural, 271.
Trees, killing with arsenic, 357.
Turnip- and rape-seed production, 311.
Turnip-seed-growing for farmers, 303.

U.

Unfermented grape-juice, preservation of, 32.
Use of sulphur in agriculture, 6.

V.

Valuations of seedy wool, 123.
Vegetable dyestuffs and indigenous tans of New Zealand, the, 358.

Vegetable seeds, protecting in ground, 307.
Vine, downy mildew of the, 367.
Vines, nicotine fumigation unsuccessful for mealy bug on, 166.
Viticulture (monthly notes), 112, 177, 239, 298, 378.

W.

Waipoua kauri forest: Its demarcation and future management, 136.
Waipukurau County, pasture top-dressing test in, 284.
Walnut-disease, 115.
Warts on calf's face, 58.
Warts on cow's teats, 117.
"Water-core" of apples, 308.
Western Wolths rye-grass for cow-forage, 117.
Wheat ear-blight in Canterbury, 182.
Wheat-growers, assistance to, 309.
Wheat and oats, estimated yield, 124.
Wheat and oats threshings, 248, 309, 388.
Wheat, importation of fowl-, 248.
Wheat, pedigree seed, 248.
Wheat-purchase scheme, Government, 119.
Wheat, retail price of, 309.
Wood-ashes for indoor tomatoes, 305.
Wood-ashes for manuring (notice), 353.
Wool, purchase of by Imperial Government, 59.
Work for the coming month, 42, 101, 168, 231, 291, 371.
Worm trouble in dog, 117.

Y.

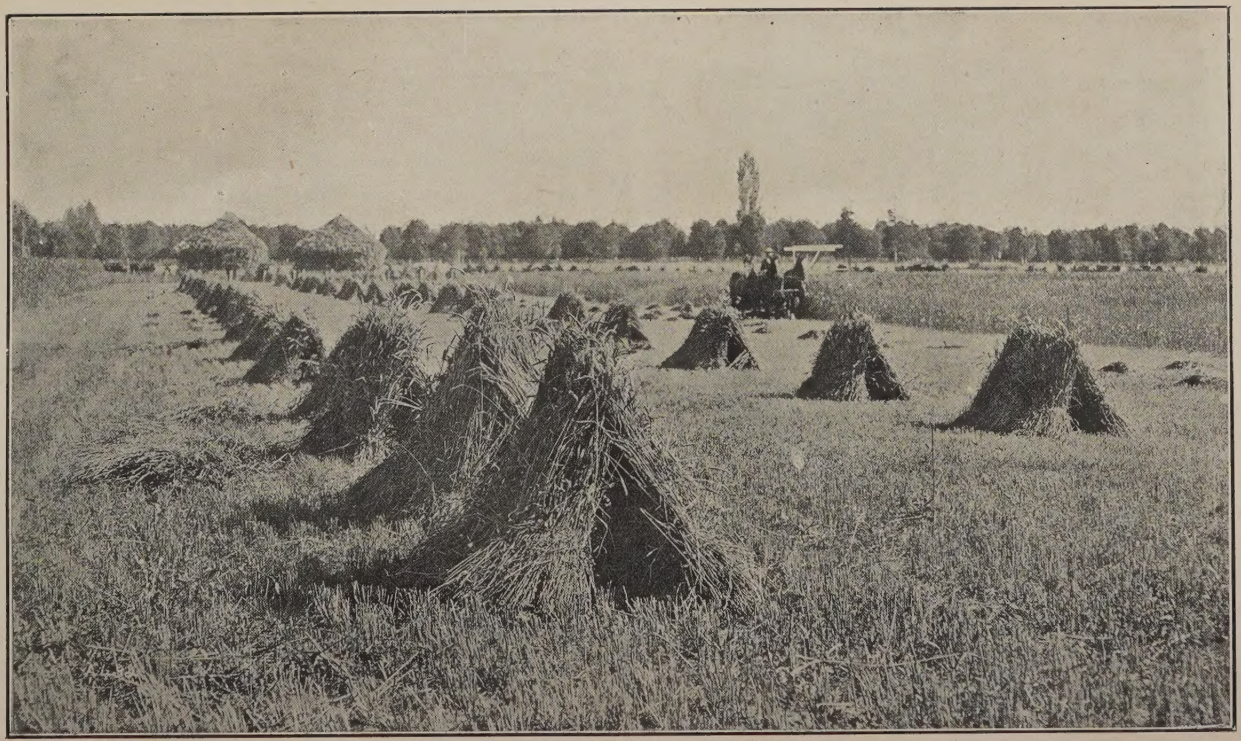
Yarrow, control of, 183.

ILLUSTRATIONS.

Page.

A wheat harvest at Ruakura: *Frontispiece, January.*
Development of swamp land at Ruakura—
Portion of swamp area 2
Part of 13-acre field in rye-grass and white clover 4
Another 12-acre field of Western Wolths rye-grass and clover 5
Dehorning of cattle—
Horns sawn off, showing hollows 8
Horns removed half an inch from the head 9
Certificate-of-record cows: A study of type—
Dominion Mutual Mercedes of Rock 17
Dominion Domino's Pride 17
Flannel filter for grape-juice 35
Manuka-crushing implement (Ashford's) 41
Woodcrest Johanna Tehee—New Zealand Milk-record Champion (1918): *Frontispiece, February.*
Testing of purebred dairy cows in 1917—
Oakwood Topsy (Friesian mature class) 65
Woodstock's Baby (Jersey junior two-year-old class) 68
Ellesmere Lass (Ayrshire three-year-old class) 71
Dominion Daphne V 72
Hop-picking in Nelson: *Frontispiece, March.*
Strawberry-culture—
Single hedge-row 145
Triple hedge-row 145
Spaced row 146
Pistillate blossom and staminate blossom 149
Ruakura homestead from the drive 155
Root-knot: Roots of peach-tree imported from Australia 167
On the Upper Wanganui: *Frontispiece, April.*

	Page.
Estuary reclamation at Invercargill—	
New River estuary reclamation in the making	188
Mud-flats on reclaimed area	189
Mowing surface-sown grass and clover on the prison farm area	190
The hay crop in cocks on the same area	191
Young cattle on the prison farm area	192
The " Deadman " super-cleaner in operation at the Ruakura Apiary	204
A Marlborough homestead : *Frontispiece, May.*	
Grading of fruit-trees—	
Graded apple-trees (branched)	268
Graded apple-trees (rods)	269
Control of brown-rot—	
Brown-rot experiments at Henderson—No. 1 orchard	278
Experimental area in No. 2 orchard	279
Young Friesians at Weraroa	285
Control of black-spot : Bon Chretién pears of Mr. J. G. Veall's 1917–18 crop	290
Southern pastoral country : *Frontispiece, June.*	
Private forestry—	
Stand of *Eucalyptus corynocalyx* at " Fernglen," Masterton	337
Eucalyptus regnans at " Ica," Whareama	341
Pinus insignis large enough for milling (" The Pines," Carterton)	345
Sequoia sempervirens (Californian redwood) at " The Pines," Carterton	349
One-man sheep-handling plant	354
Seed-testing notes—	
Californian-thistle seeds picked out of crested-dogstail sample	369
Californian thistle in sample of crested dogstail	370
Oliver's Pride bean	382
Certificate-of-record cows : Tulip (Ruakura Milking Shorthorn herd)	387



Wheat Harvest at Ruakura.